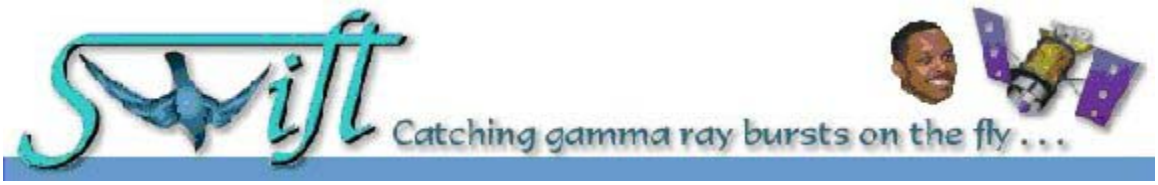

CF2-136 Primer Application Procedure

410.4-PROC-0057

Revision -

Goddard Space Flight Center

Greenbelt, Maryland

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CHANGE RECORD PAGE (1 of 2)

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1 General

1.1 Introduction

The BAT instrument requires a coded aperture mask that is 4'x 8'x 1.54" in size. Approximately 52,000 lead tiles (5x5x1 mm) will be bonded to the mask in a predetermined nonrepeating random pattern covering about 50% of the panel surface.

Each tile will be cleaned, primed, and precured with a 4mm x 4mm square layer of CV10-2568. In addition, a skim coat of wet CV10-2568 will be applied to the substrate for adhering the precured tiles to the panel surface. Primer must be applied to the lead tiles and the substrate per 410.4-PROC-0057 prior to application of the CV10-2568.

1.2 Applicable Documents

GSFC-Swift-410-Spec-002	Swift Mission Assurance Requirements Document
410.4-MGMT-0005	BAT Mechanical Requirements Document
NHB8060.1	Flammability Odor and Offgassing Requirements
NASA/GSFC	Engineering Services Division Safety Manual, September 1990
NASA RP-1124 (Revision 4)	Outgassing Data for Selecting Spacecraft Materials
ASTM E-595-93	Test Method for Total Mass Loss and Collected Volatile Condensable Materials from Outgassing in a Vacuum Environment
410-4-PG-8730.3.1	Swift Quality Management Plan

1.3 Responsibilities

The BAT Mask Lead Engineer is responsible for providing authorization for the activity, technical advice, assistance during handling operations, coordination, and notification to all applicable personnel. Only trained and qualified personnel, the Lead Engineer and Lead Technician are permitted to perform the following tasks. Additional personnel will only be used if specifically authorized by the cognizant engineer.

The GSFC Code 300 Quality Assurance (QA) representative shall be responsible for monitoring the operation and verifying all steps of the procedure are signed & dated.

1.4 Safety

Emergency Actions: When an unsafe condition exists, the Mask Lead Technician will take immediate action to prevent injury to personnel or hardware.

1.5 Procedure Deviations

Deviations from this procedure shall be redlined in the official copy and will be initialed by the BAT Mechanical PDL and or designee and QA representative.

1.6 Quality Assurance

QA will monitor all operations as specified in this procedure. They shall stamp or initial to verify that all operations listed are acceptable as indicated.

1.7 Priming Summary

The CF2-136 silicone primer is manufactured by NuSil for use with CV10-2568 silicone adhesive. Prior to priming any surface with CF2-136, the expiration date should be recorded and only primer within the manufacturer's specified shelf life should be used. The CF2-136 will be placed in a clean Badger 150-4 Airbrush Tool reservoir.

The airbrush device must be connected to a nitrogen tank. Be sure to reattach and tape the venting tube closed. Always wear a full face respirator and clear the area of all people prior to applying the primer. Spray the primer evenly over the entire bonding surface and use paper to adjust flow and verify coverage.

2 Requirements

2.1 Required Equipment

CF2-136 Red Primer
Polyethylene Gloves
Horizon Tech Wipes
G10 Skim Template
ACS Grade Acetone
Nitrogen Tank
Badger 150-4 Airbrush Tool
Nitrile Gloves
4mm Tile Priming Grid
Containment Tent
ACS Grade Isopropanol
Exhaust System

2.2 Required Personnel

Title	Name
Mask Lead Technician	Mike Schoolman

3 Procedures

3.1 CF2-136 Primer Application Procedure

Event #	Responsible Code	Event Description	Signature and Date		NCR #	Product Disposition Completion Date
			17. Performed by	18. Inspected by		
3.1.1		**Using polyethylene gloves, flood the Badger 150-4 Airbrush Tool with Acetone, allow it to air dry, flood with Isopropanol, and allow it to air dry before and after each use.**				
3.1.2		**Record all pertinent information in the Priming Log.**				
3.1.3		Obtain NuSil's CF2-136 pre-mixed red primer. Visually inspect primer for proper consistency.				
3.1.4		Check CF2-136 label for the expiration date and verify it is within the specified shelf life. **Lot #_____ Date Used_____ Expiration Date_____**				
3.1.5		Fill the clean, dry Badger 150-4 airbrush tool reservoir with CF2-136.				
3.1.6		Connect airbrush tool to nitrogen supply at approximately 15-20 psi pressure.				
3.1.7		Hold air gun approximately 12 inches from scrap paper and adjust flow to provide a "thin coat." Verify coverage, reddish color should be barely detectable.				
3.1.8		Spray primer evenly and avoid overlapping on bonding surface. View surface at an angle to monitor coverage. **Use within 29 days. Prime Date _____ Use By Date _____**				
3.1.9		Remove excess primer from tool reservoir and discard. per hazardous waste disposal procedures. Clean airbrush tool per 3.1.1.				

Event #	Responsible Code	Event Description	Signature and Date		NCR #	Product Disposition Completion Date
			17. Performed by	18. Inspected by		
3.1.10		Let primer air dry at room temperature and a minimum of 30% RH for a **minimum of 30 minutes.** **Start Time _____ End Time _____**				
3.1.11		**Be sure to bond primed surface by Use By Date.**				

GSFC Form 4-30 Rev. A